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SENATE REPUBLICAN POLICY COMMITTEE

Legislative Notice

No. 60 June 3, 2008

S. 3036 – The Lieberman-Warner Climate Security Act of 2008

Calendar No. 742

S. 3036 was read twice and placed on the Calendar on May 21, 2008.

Noteworthy

- S. 3036 contains legislative text identical to that of S. 2191 as reported by the Committee on Environment and Public Works on December 5, 2007, with the addition of several changes made subsequent to initial scoring from the Congressional Budget Office (CBO).

- The bill establishes caps on emissions of greenhouse gases and permits the trading of emissions permits or allowances. Covered entities, including petroleum, natural gas, and fluorinated gas producers, as well as electricity generators and facilities that use more than 5,000 tons of coal per year, must comply with total sector-specific emissions limits established on a per-year basis between 2012 and 2050 by submitting allowances or allowance equivalents. Emissions are measured as units of carbon dioxide (CO_2) metric ton equivalents. Sponsors of the bill estimate that by 2050, emissions by covered sectors will be reduced to a level 71 percent below 2005 levels and that total emissions estimated will be reduced by up to 66 percent below 2005 levels for the same period.

- The managers of the bill are expected to offer a full substitute that will serve as the base bill for Senate consideration. The substitute retains the same volume of permitted CO_2 emissions through 2050 and the basic schedule of required reductions. The substitute changes how allowances are distributed and the shares entities receive, adds auctions of future allowances, and changes how offsets are permitted to be used by covered entities. It does not contain provisions creating a Climate Change Credit Corporation. It adds a title designed to make certain auction revenues available for deficit reduction, subject to appropriation. The substitute also contains expansions of Davis-Bacon requirements.

- The Statement of Administration Policy (SAP) for S. 3036 indicates the President would veto the bill. Citing concerns over the economic cost of the bill, the SAP also asserts that

S. 3036 fails to address current impediments to large-scale nuclear power generation, assumes the use of undeveloped technologies, and fails to prevent the "misapplication of a patchwork of 30-year-old laws that were not designed to regulate greenhouse gas emissions."

- CBO estimates that the substitute amendment would increase revenues by about $902 billion over the 2009-2018 period. Direct spending would total about $836 billion for the same period, yielding revenues in excess of direct spending by $66 billion. CBO notes that it did not have sufficient time to estimate discretionary spending or the anticipated receipts from the international reserve allowance requirement for certain imported goods.

Highlights

Unless otherwise specified, this notice pertains to the anticipated substitute.

Carbon Emissions, Caps, and Allowances:
The bill establishes two sets of capped greenhouse gas (GHG) emissions. For hydroflorocarbons (HFCs), the bill establishes an initial cap of 289 million tons of CO2 equivalent in 2012. For subsequent years, the bill directs the Environmental Protection Agency (EPA) to establish caps equal to reductions at a level not to exceed 15 percent below 2005 levels in 2020, 45 percent below 2012 levels in 2030, and 70 percent below 2012 levels between 2040 and 2050.

For non-HFC GHGs, mainly CO2, the bill specifies for each of the calendar years 2012 through 2050 a total number of allowances available. The bill also establishes that certain percentages of those allowances will be distributed to covered and non-covered sectors. The balance of those allowances will be auctioned.

The bill establishes CO2-equivalent caps for each year between 2012 and 2050. Emissions caps for selected years are listed below:

2012	5,775 million metric tons of CO2 equivalent (MMTCO2E)
2020	4,924 MMTCO2E
2030	3,860 MMTCO2E
2040	2,796 MMTCO2E
2050	1,732 MMTCO2E

Generally, but not in all cases, increasing shares of the allowances are auctioned while the number (expressed as a percentage in the substitute) of allowances given to covered sectors and other recipients decreases.

Allocations:
A significant part of the substitute is devoted to specifying either distributions of allocations of available allowances or proceeds from auctioned allowances to a variety of entities for identified purposes. These allocations are typically expressed in the bill as a percentage of the allocations available for any given year. These allocations are directed to regulated entities and certain industries; certain consumers; states, tribes and local governments; workers in identified industries; certain federal programs/agencies; and foreign countries; as well as for deficit reduction and administrative functions. Some allocations decrease over time; others increase in years 2030-2050. Recipients of allocations may consign their allowances to EPA and receive the proceeds of the sale of those allowances (Section 441).

Distributions are summarized below by title and section for selected years:

		Percentage Share by Selected Year		
Section	**Category**	**2012**	**2030**	**2050**
TITLE III-REDUCING EMISSIONS THROUGH OFFSETS AND INTERNATIONAL ALLOWANCES				
331	Agriculture And Forestry	4.25	4.25 (4.50 Beginning 2031)	4.50
	TITLE III TOTAL	*4.25*	*4.25 (4.50 Beginning 2031)*	*4.50*
TITLE V-FEDERAL PROGRAM TO PREVENT ECONOMIC HARDSHIP				
532	Transition Assistance For Workers	1.00	3.00	3.00
541	Transition Assistance For Carbon-Intensive Manufacturers	11.00	1.00	
551	Transition Assistance For Fossil Fuel-Fired Electricity Generators	18.00	2.75	
561	Transition Assistance For Refiners Of Petroleum Based Fuel	2.00	1.00	
571	Transition Assistance For Natural Gas Processors	.75	.75	
582	Federal Program For Energy Consumers	3.50	12.00	15.00
	TITLE V TOTAL	*36.25*	*20.50*	*18.00*
TITLE VI-PARTNERSHIPS WITH STATES, LOCALITIES, AND INDIAN TRIBES				
601	Partnership For Assisting Energy Consumers Through Local Electricity Distribution Companies	9.50	10.00	10.00
601	Partnership For Assisting Energy Consumers Through Local Natural Gas Distribution Companies	3.25	3.50	3.50
602	Partnership For Assisting State Economies That Rely Heavily On Manufacturing And Coal	3.00	3.50	4.00
611	Partnership For Public Transportation Activities	1.00	2.75	2.75
613	Partnership For And Energy Efficiency And Conservation Block Grant Program	2.00	2.00	2.00
614	Partnership For Distribution Among State Leaders In Reducing Emissions	4.00	8.00	10.00
621	Partnership For Activities Carried Out To Adapt To Climate Change	3.00	3.50	4.00
631	Partnership For The State Wildlife Adaption Fund	2.00	4.00	4.00
	TITLE VI TOTAL	*27.75*	*37.25*	*40.25*
TITLE VII-RECOGNIZING EARLY ACTION				
702	Early Action Program	5.00		
	TITLE VII TOTAL	*5.00*		
TITLE VIII-EFFICIENCY AND RENEWABLE ENERGY				
801	Efficient Building Allowance Program	.75	.75	.75
811	Super-Efficient Equipment And Appliances Program	.75	.75	.75

821	Efficient Manufacturing Program	.75	.75	.75
831	Renewable Energy	4.00	4.00 (1.00 Beginning 2031)	1.00
	TITLE VIII TOTAL	*6.25*	*6.25 (3.25 Beginning 2031)*	*3.25*
TITLE IX-LOW-CARBON ELECTRICITY AND ADVANCED RESEARCH				
903	Low And Zero Carbon Electricity Technology Fund	1.75	2.00 (1.00 Beginning 2031)	1.00
911	Energy Transformation Acceleration Fund	.25	.25	.25
	TITLE IX TOTAL	*2.00*	*2.25 (1.25 Beginning 2031)*	*1.25*
TITLE X-FUTURE OF COAL				
1002	Kick-Start For Carbon Capture And Sequestration	1.00		
1011	Long-Term Carbon Capture And Sequestration Incentives	3.00	4.00	1.00
	TITLE X TOTAL	*4.00*	*4.00*	*1.00*
TITLE XI-FUTURE OF TRANSPORTATION				
1102	Kick-Start For Clean Commercial Fleets	.5		
1112	Advanced Vehicle Manufacturers	1.00	1.00	1.00
1121	Cellulosic Biofuel	1.00	1.00	
	TITLE XI TOTAL	*2.50*	*2.00*	*1.00*
TITLE XII-FEDERAL PROGRAM TO PROTECT NATURAL RESOURCES				
1202	Federal Programs To Protect Natural Resources	3.00	4.00	5.00
	TITLE XII TOTAL	*3.00*	*4.00*	*5.00*
TITLE XIII-INTERNATIONAL PARTNERSHIPS TO REDUCE EMISSIONS AND ADAPT TO CLIMATE CHANGE				
1312	International Partnership To Reduce Deforestation And Forest Degradation	1.00	1.00	1.00
1321	International Partnership To Deploy Clean Energy Technology	.5		
1331	International Partnership To Adapt To Climate Change And Protect National Security	1.00	4.00	7.00
	TITLE XIII TOTAL	*2.50*	*5.00*	*8.00*
TITLE XIV-REDUCING THE DEFICIT				
1402	Deficit Reduction Fund	5.75	13.75	16.75
	TITLE XIV TOTAL	*5.75*	*13.75*	*16.75*
TITLE XVII-MISCELLANEOUS				
1702	Climate Security Act Administrative Fund	.75	(1.00 Beginning 2031)	1.00
	TITLE XVII TOTAL	*.75*	*(1.00 Beginning 2031)*	*1.00*
	TOTAL	*100%*	*99.25%*[1]	*100%*

Analysis of Impacts:
At the request of Congress, the Environmental Protection Agency (EPA) and the Energy Information Agency (EIA) conducted analyses of the projected economic impacts of S. 3036. EPA did not model the benefits of reducing emissions, nor did it include in the base case the impacts of the Energy Independence and Security Act of 2007. Selected results include:

[1] Note that the allocation (.75 percent) provided in Sec. 1702 ends in 2027. Phase two of the allocation does not begin until 2031. This appears to explain why the total for 2030 as allocated does not reach 100 percent.

EPA:

- GDP: EPA found GDP to be between 0.9 percent ($238 billion) and 3.8 percent ($983 billion) lower in 2030 and between 2.4 percent ($1,012 billion) and 6.9 percent ($2,856 billion) lower in 2050.
- Gasoline prices: Prices are projected to be $0.53 per gallon higher in 2030, and $1.48 per gallon higher in 2050.
- Electricity: Electricity prices are projected to increase by 44 percent in 2030 and 26 percent in 2050, assuming the cost of allowances can partially be passed on to consumers.
- GHG reductions: Global concentrations are estimated to drop by 25 parts per million (ppm) in 2090.

  Note: EPA's modeling used the American Energy Outlook (AEO) 2006 data for its reference case.

EIA:

- GDP: EIA found GDP to be between 0.1 percent ($27 billion) and 0.8 percent ($163 billion) lower in 2030.
- Gasoline prices: Prices are projected to be $0.22 to $0.49 per gallon (9 to 21 percent) higher in 2020 and $0.41 to $1.01 per gallon (17 to 41 percent) higher in 2030.
- Electricity: Electricity prices are projected to increase by between 5 percent and 27 percent in 2020 and between 11 percent and 64 percent in 2030. Under S. 3036, average annual household energy bills, excluding transportation costs, are $30 to $325 higher in 2020 and $76 to $723 higher in 2030.

  Note: EIA's modeling used the American Energy Outlook (AEO) 2008 reference case, which included the changes in law included in the Energy Independence and Security Act of 2007.

Auction Revenue Distribution:
The summary of the substitute circulated by the co-sponsors provides estimates of the value in dollars of the allowances distributed in specific sections of the bill. Each estimate is derived from the product of the estimated price of an allowance multiplied by the estimated number of allowances distributed in the legislation (as noted, the allowances are distributed as a percentage of available allowances). Aggregation of the $3.3 trillion in auction proceeds and the $3.4 trillion in allowances yields a total of $6.7 trillion in distributed funds or allowances. Subtracting from this total the auction proceeds allocated for deficit reduction ($955 billion, as estimated by the authors) yields a total of $5.7 trillion.

Items of Note in the Managers' Amendment

Offsets:
The substitute sets an annual percentage limit of on the number of offsets that entities may utilize to meet their submission requirements. This percentage is calculated as a portion of the total emissions available for any year. In S. 2191 as reported and in S. 3036, each entity's use of offsets was limited as a percentage of its own required submissions.

For domestic allowances, the substitute directs EPA to distribute offset allowances in a quantity no more than 15 percent of the total quantity of any given year. International allowances and international forest carbon credits may be used to make up the balance. Carry-over to the following year is permitted if the 15 percent threshold is not reached.

For international offset allowances, the substitute directs EPA to distribute offset allowances in a quantity no more than 5 percent of the total quantity of any given year. For international forest offset allowances, EPA is directed to distribute allowances up to 10 percent of the total quantity of emission allowances for each year.

Climate Change Credit Corporation:
S. 3036 created the Climate Change Credit Corporation (CCCC) and gives it responsibility for auctioning the allowances created by the federal government and for spending the proceeds on programs, initiatives, research and development of renewable energy technologies, wildlife adaptation programs, and programs to provide assistance to low-income energy consumers. The substitute does not include the CCCC provision; rather, EPA will conduct auctions and deposit funds into designated accounts at the Department of the Treasury.

Carbon Market Efficiency Board:
Title V of the substitute creates a seven-member Carbon Market Efficiency Board (CMEB) with discretionary authority to temporarily adjust the availability of allowances available to covered entities through borrowing, expand the period during which a covered entity must repay EPA for borrowed allowances, and increase allowances available from foreign GHG trading markets. If allowances are borrowed they become available at the "expense" of the total available allowance in future years, retaining the stringency of the aggregate emissions. Unlike S. 3036, however, the CMEB may not reduce the interest rate applicable to borrowed allowances.

Cost-Containment Auctions/Regular Auctions:
Subtitle C of Title V is titled "Emergency Off-Ramps." The subtitle establishes that beginning in 2012, EPA shall hold a "cost-containment" auction in December of each year. The President will set the allowance price at this auction at no lower than $22 per allowance and no higher than $30 per allowance, with annual increases applicable to the rate of inflation plus 5 percent. At regular auctions in 2012, the reserve price shall be $10; at subsequent auctions, the reserve price increases at a rate of inflation plus 5 percent (Section 524). This provision essentially permits entities to purchase additional allowances from future years for compliance in a current year. As noted, the price range is set in the legislation.

The pool of allowances sold at cost-containment auctions will be established by utilizing 6 billion allowances established for the years 2030-2050. The quantity taken from each year in the years 2031-2050 will decrease by one percent. Any allowances not sold at a minimum price in the "regular auction" will also be added to the cost-containment auction pool. Only entities that were required to submit allowances in the prior year may purchase allowances at the auction (Section 522). Seventy percent of proceeds from the cost-containment auction are to be used to achieve additional GHG reductions from sources not covered by the cap specified in the bill (Section 527). Thirty percent of proceeds shall be deposited into the Climate Change Consumer Assistance Fund which could be used for low-income tax cuts (Section 527). Prior-year allowances are to be auctioned before current year allowances (Section 528). From 2022-2027, EPA must remove from the cost-containment pool any allowance that has remained in the pool for more than nine years and that was initially established for a calendar year that is fewer than ten years in the future. These allowances are then to be made available at regular auction (Section 528). If the pool is exhausted EPA may not conduct any additional auctions. After termination of the cost-containment auctions, allowances unsold at regular auction must be retired (Section 530).

International/Trade Related Provisions:
Title VI of S. 3036 contains provisions requiring the submission of certain international reserve allowances for products imported into the United States from a country without a "comparable" emissions limitation regime. Section 1311 of the substitute retains this feature. Importers of covered products from listed countries must begin submitting reserve allowances as early as 2014 rather than in 2020 as in S. 3036. Covered items, for purposes of the submission requirement, now include iron, steel, steel mill products, aluminum, cement, glass, pulp, paper, chemicals, industrial ceramics, or any other manufactured product sold in bulk that generates, in the course of manufacture, a substantial quantity of direct and/or indirect GHG emissions.

Davis-Bacon:
Expansions of the Davis-Bacon Act can be found in the following provisions in the substitute (these provisions were not included in S. 3036):

- Section 832 (Bonus Allowances for Renewable Energy) applies the Davis-Bacon Act requirements to emission allowances rewarded for construction or repair of renewable energy sources.

- Section 909 (Selection Criteria) applies the Davis-Bacon Act to any distribution from the newly-created Low- and Zero-Carbon Electricity Technology Fund for construction/repair/conversion of facilities which produce electricity from new zero- or low-carbon generation.

- Section 1005 (Kick-Start Program) applies the Davis-Bacon Act to any distribution from the newly-created Carbon Capture and Sequestration Technology Fund for construction/repair/conversion of facilities deployment of carbon capture and sequestration technology.

Transition Assistance for Workers:
The substitute establishes the "Climate Change Worker Training and Assistance Fund," a program of worker assistance broader than what was established in S. 3036.

Section 532 (Auctions) establishes that auctions are to be held between 2012 and 2050 to raise cash for the Climate Change Worker Training and Assistance Fund (CCWTAF) by auctioning a quantity of the emission allowances.

Section 534 (Use of Funds) requires that in each calendar year between 2012-2050, 30 percent of the funds deposited into the CCWTAF shall be made available for the Energy Efficiency and

Renewable Energy Worker Training Program established by the Green Jobs Act of 2007. Sixty percent of the deposited funds shall be made available to carry out the Climate Change Worker Assistance Program established by the bill. The remaining 10 percent shall be used for the Worker Training and Safety program established by the bill.

Section 535 (Climate Change Worker Assistance Program) establishes a new program to ensure that any worker or group of workers affected by federal climate change policy or legislation shall receive skill training, retraining, and job search assistance to enable them to maintain self-sufficiency and "family-sustaining" jobs. Procedures are also to be established for certification of adversely-affected secondary workers, as well as industry-wide certification.

A newly-created Office of Climate Change Adjustment Assistance at the Department of Labor is to administer the program, which is to provide for up to 36 months of: 1) a climate change readjustment allowance (a regular payment that combined with unemployment benefits equals an applicant's salary at their last job); 2) a health care replacement amount (a regular payment to a health-care provider to maintain an applicant and their family's health care benefits for the duration of the program); and 3) job training. State Employment Security Agencies, utilizing state-agency, merit-system personnel, are to assist in the administration of the program.

In addition, Section 535 provides that if a labor organization represents a substantial number of workers engaged in similar work or training in an area, the labor organization shall be consulted and may submit comments on such training programs.

Health Benefits and State Minimum Wage Preference:
Priority is given for disbursal of emissions allowances under the Efficient Manufacturing Program in Section 822 for recipients that compensate workers in an amount, at a minimum, equal to 100 percent of the state average manufacturing wage, plus health insurance benefits.

Under the zero- and low-carbon generation technology awards in Section 909, recipients are required to compensate workers in an amount equal to at least 100 percent of the state average manufacturing wage, plus health insurance benefits.

Emergency Declaration by the President:
Section 1711 of the substitute permits the President to modify any requirement in the bill if the President determines that a national security, energy security, or economic security emergency exists, and it is "in the paramount interest of the United States to modify any requirement under this Act to minimize the effects of the emergency." The language provides that "Congress shall rescind or modify" such a declaration, "if necessary," within 30 days. The proclamation is terminated in 180 days unless the President requests an extension. This provision was not included in earlier versions of S. 2191 and is therefore not in S. 3036.

"Deficit Reduction":
Title XIV of the substitute establishes a fund at the Department of the Treasury that is funded through the auction of certain percentages of allowances. Funds are to be appropriated for "deficit reduction." Percentage allocations for this purpose start at 5.75 percent, and increase to 16.75 percent in 2050.

Background

Global Warming:
As stated in the findings, the objectives of S. 3036 are to "reduce United States greenhouse gas emissions substantially enough to avert the . . . impacts of global climate change." According to the bill's authors, enacting S. 3036 would decrease total U.S. GHG emissions by up to 66 percent below 2005 levels by 2050.

The Intergovernmental Panel on Climate Change's (IPCC) Fourth Assessment Report was released in 2007. The report asserted that levels of carbon dioxide in the atmosphere have risen from a pre-industrial value of about 280 parts per million (ppm) to 379 ppm in 2005.[2] Levels of other GHG gases, like methane, have also risen. The increase in CO2 levels have been accompanied by increases in global average temperatures, by about 0.74 degrees C (±0.18 degrees C) or 1.3 degrees F over the last century. The IPCC concluded that "(m)ost of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic GHG concentrations."[3] The panel has also suggested that global warming would give rise to specific negative impacts in North America and elsewhere around the globe. IPCC scenarios suggest that to achieve a 500 ppm GHG stabilization would require global emissions to peak by 2015, and be reduced 50 to 85 percent below 2000 levels by 2050.

While the authors of S. 3036 suggest that this bill will achieve "reductions on the order of those recommended by the IPCC," critics point out that the emissions reductions called for by the IPCC can only be achieved with significant additional international action by all major economies.

EPA estimates that adoption of S. 3036 will result in reductions of global concentrations of CO2 of between 7-10 ppm in 2050 and 25-28 ppm in 2095 with no additional international action. EPA's reference case projected global concentrations to be about 507 ppm in 2050 and about 718 ppm in 2095.[4] Critics of the bill have noted that this reduction will result in only a negligible effect on global average temperatures. Supporters contend that provisions in the bill requiring the submission of international allowances for certain imported goods will both protect American jobs and provide an incentive for countries such as China and India to agree to mandatory emissions limitations. Supporters also note that the United States must lead the effort to establish a binding global cap on GHG emissions.

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[2] United Nations Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2007: The Physical Science Basis, Summary for Policymakers*, February 2007, p. 5.
[3] IPCC, *Summary for Policymakers*, p. 5
[4] See EPA testimony by Brian J. McLean, Director, Office of Atmospheric Programs, Office of Air and Radiation, before the Committee on Energy and Natural Resources, May 20, 2008. See also *EPA Analysis of the Lieberman-Warner Climate Security Act of 2008*, p. 192.

Bill Provisions

The provisions outlined below describe the substitute amendment.

Title I – "Immediate Action"

Subtitle A−Tracking Greenhouse−Gas Emissions: Creates a greenhouse gas registry to inventory greenhouse gas emissions.

Subtitle B−Early Clean Technology Deployment: Authorizes a number of programs, including an energy−efficient buildings program, a program providing incentives to retailers for sales of efficient equipment and appliances, and a program for operators of truck fleets to make their vehicles more efficient.

Subtitle C−Research: Establishes several research programs focusing on drinking water utilities, coal, Clean Air Act compliance, black carbon emissions, and recycling.

Title II – "Capping Greenhouse Gas Emissions"

Establishes a declining amount of permitted GHG emissions between 2012 and 2050.

Title III – "Reducing Emissions Through Offsets and International Allowances"

Subtitle A−Offsets in the United States: Establishes a program through which farmers and foresters can take actions qualifying them for domestic offset credits, which facilities can submit for compliance.

Subtitle B−Offsets and Emission Allowances From Other Nations: Allows U.S. facilities covered under the bill's cap to meet up to 15 percent of their greenhouse gas emission reduction obligations by reducing GHG emissions overseas, subject to specific rules. Up to 5 percent can be met with project−based credits, and up to 10 percent can be met by international credits for international forest protection. Any capacity not met by those two types of credits may be met by allowances from approved international cap and trade programs.

Subtitle C−Agriculture and Forestry Program in the United States: Establishes that a certain percentage of allowances for applicable calendar years be distributed through a program designed to award agriculture and forestry programs that cut emissions.

Title IV – "Establishing a Greenhouse−Gas Emissions Trading Market"

Subtitle A−Trading: Permits holders of allowances–including non-covered entities–to sell, exchange, or transfer the allowances.

Subtitle B−Market Oversight and Enforcement: Establishes oversight principles for the carbon allowances market. Establishes a Carbon Markets Working Group.

Subtitle C−Carbon Market Efficiency Board: Establishes a Carbon Market Efficiency Board to provide general market monitoring and reporting to Congress. The board is permitted to employ cost relief measures, including relaxing restrictions on borrowing or offsets.

Subtitle D−Climate Change Technology Board: Establishes a five-member Climate Change Technology Board to distribute technology funding from the bill. The board must notify relevant congressional committees before distributing funds.

Subtitle E−Auction on Consignment: Permits EPA to sell allowances for recipients who receive them under the bill, and transfer the proceeds of the sales to the recipients.

Title V – "Federal Program to Prevent Economic Hardship"

Subtitle A−Banking: Provides that time shall not cause an allowance to be retired or otherwise diminished.

Subtitle B−Borrowing: Permits the borrowing of allowances from EPA from future calendar year allowance totals. Covered entities may not submit borrowed allowances from years more than five years in the future. Provides for increased compliance obligations in future years from which borrowing has occurred.

Subtitle C−Emergency Off−Ramps: Permits the Carbon Market Efficiency Board to take certain actions, including the release of additional emissions allowances onto the market. The Board is barred from making more total allowances available; additional allowances are borrowed from totals permitted in later years. Provides for cost-containment auctions.

Subtitle D−Transition Assistance for Workers: Establishes that auction proceeds from a certain percentage of auctioned allowances for applicable calendar years be deposited into a Climate Change Worker Assistance Fund. Deposits are to be used to fund certain worker programs. Establishes the Office of Climate Change Adjustment Assistance, a new office at the Department of Labor.

Subtitle E−Transition Assistance for Carbon−Intensive Manufacturers: Establishes that a certain percentage of allowances for applicable calendar years be distributed among owners and operators of carbon-intensive manufacturing facilities in the United States.

Subtitle F−Transition Assistance for Fossil Fuel-Fired Electricity Generators: Establishes that a certain percentage of allowances for applicable calendar years be distributed among owners and operators of individual fossil fuel-fired electricity generators in the United States.

Subtitle G−Transition Assistance for Refiners of Petroleum-Based Fuel: Establishes that 0.75 percent of available allowances each year through 2030 be distributed among owners and operators of entities that manufacture petroleum-based liquid or gaseous fuel in the United States.

Subtitle H−Transition Assistance for Natural Gas Processors: Establishes that a certain percentage of allowances for applicable calendar years be distributed among non-Alaskan natural gas processing plants in the United States; entities that produce natural gas in Alaska or the federal waters of the outer Continental Shelf off the coast of Alaska; and entities that hold title to natural gas, including liquefied natural gas, or natural-gas liquid at the time of importation into the United States.

Subtitle I−Financial Relief for Consumers: Establishes a Climate Change Consumer Assistance Fund. Establishes that auction proceeds from a certain percentage of auctioned allowances for applicable calendar years be deposited into the Fund and that proceeds from the fund may not be made available except pursuant to an appropriations act. States that it is the Sense of the Senate that proceeds deposited in the Fund should be used to fund a tax initiative to protect consumers "in greatest need" from increases in energy costs and other costs.

Title VI – "Partnerships with States, Localities, and Indian Tribes"

Subtitle A−Partnerships with State Governments to Prevent Economic Hardship While Promoting Efficiency: Establishes that a certain percentage of allowances for applicable calendar years be distributed to local electricity distribution companies and natural gas distribution companies. Local distribution entities are directed to distribute emission allowance proceeds to "consumer classes…including low-income and middle-income residential energy consumers and small business commercial consumers." Recipient entities must establish a climate change impact assistance program and provide no less than 30 percent of allowance sales proceeds to low-income residential energy consumers. Distributes a percentage of allowances to states heavily dependent on coal.

Subtitle B−Partnerships with States, Localities, and Indian Tribes to Reduce Emissions: Establishes that a certain percentage of allowances for applicable calendar years be auctioned, and the proceeds used to fund mass transit grants and grants associated with the Energy Efficiency and Conservation Block Grant program. States that EPA determines have been "leaders in the effort of the United States to reduce greenhouse gas emissions and improve energy efficiency" are to be given a certain percentage of emissions in certain years. Specifies the use of these funds.

Subtitle C−Partnerships with States and Indian Tribes to Adapt to Climate Change: Establishes that a certain percentage of allowances for applicable calendar years be allocated to states and Indian tribes "for activities carried out in response to the impacts of global climate change."

Subtitle D−Partnerships with States, Localities, and Indian Tribes to Protect Natural Resources: Establishes that auction proceeds from a certain percentage of auctioned allowances for applicable calendar years be deposited into a "State Wildlife Adaptation Fund." Funds are to be transferred to the Pittman−Robertson Wildlife Conservation and Restoration Account and the Land and Water Conservation Fund for Wildlife and Water Conservation activities.

Title VII – "Recognizing Early Action by Companies"

Directs the establishment of an "Early Action Program" by EPA. Establishes that a certain percentage of allowances for applicable calendar years be allocated for distribution to entities that emit GHGs and have taken actions resulting in verified emissions reductions. Qualifying actions must have occurred after January 1, 1994, but before the publication of regulations under the Act.

Title VIII – "Efficiency and Renewable Energy"

Subtitle A−Efficient Buildings: Establishes that 0.75 percent of allowances available through 2050 be allocated to the Climate Change Technology Board for an Efficient Buildings Allowance Program, whereby the Board will in turn distribute allowances to owners of buildings that improve energy performance on existing or newly built structures.

Subtitle B−Efficient Equipment and Appliances: Establishes that 0.75 percent of allowances available through 2050 be allocated to the Climate Change Technology Board for a "Super-Efficient Equipment and Appliances Deployment Program," whereby the Board will in turn distribute allowances to retailers and distributors for increasing their sales of high efficiency building equipment, electronics, and appliances.

Subtitle C−Efficient Manufacturing: Establishes that 0.75 percent of allowances available through 2050 be allocated to the Climate Change Technology Board for an Efficient Manufacturing Program, whereby the Board will in turn distribute allowances to owners and operators of manufacturing facilities in the United States for "achieving high levels of efficiency in the operations of the owners and operators." Among other factors, the Board is directed to give priority to entities that have the "greatest use of domestically-sourced parts and components," "are located in States with the greatest availability of unemployed manufacturing workers," and compensate workers at or above the minimum wage plus health insurance benefits.

Subtitle D−Renewable Energy: Establishes that a certain percentage of allowances available in applicable years through 2050 be allocated to the Climate Change Technology Board for distribution to owners, operators, and developers of a renewable energy resource to include solar, wind, geothermal, incremental hydropower, biomass, ocean waves, landfill gas, livestock methane, and fuel cells powered by a renewable-energy source. Award of allowances is limited to those entities that pledge in writing that they will use prevailing-wage rates.

Title IX – "Low Carbon Electricity and Advanced Research"

Subtitle A−Low Carbon Electricity Technology: Establishes that auction proceeds from a certain percentage of auctioned allowances for applicable calendar years be deposited into a "Low- and

Zero-Carbon Electricity Technology Fund." The Climate Change Technology Board is to use the Fund's contents to award financial incentives for new low carbon electricity production technology. Financial awards are to be made in the form of production payments per output. Electricity generators and manufacturing facilities which manufacture these technologies or components for these technologies can qualify for awards.

Subtitle B−Advanced Research: Establishes that auction proceeds from a certain percentage of auctioned allowances for applicable calendar years be deposited into an "energy transformation acceleration" fund at the Department of the Treasury to be administered by the Advanced Research Projects Agency of the Department of Energy. Amounts deposited may not be disbursed except pursuant to an appropriations act.

Title X – "Future of Coal"

Subtitle A−"Kick-Start for Carbon Capture and Sequestration:" Establishes that auction proceeds from a certain percentage of auctioned allowances for applicable calendar years be deposited into a "Carbon Capture and Sequestration Technology Fund" at the Department of the Treasury. Funds will be available for disbursal by the Climate Change Technology Board for early deployment of carbon capture and sequestration technology in the United States. Funds are available to the Board without further appropriation or fiscal year limitation. Recipients of funds under the program must pay prevailing wages.

Subtitle B−Long−Term Carbon Capture and Sequestration Incentives: Establishes that a certain percentage of allowances available through 2050 be available for disbursal as bonus allowances for carbon capture and sequestration projects in the United States.

Subtitle C−Legal Framework: Directs EPA to complete rulemaking for commercial-scale geological carbon sequestration. Directs the completion of a study concerning the use of pipelines and facilities for geological carbon sequestration.

Title XI – "Future of Transportation"

Subtitle A−"Kick-Start for Clean Commercial Fleets": Establishes that 0.5 percent of allowances available through 2017 be available for disbursal to purchasers of medium and heavy-duty hybrid vehicles based on increases in fuel efficiency.

Subtitle B−Advanced Vehicle Manufacturers: Establishes that auction proceeds from a certain percentage of auctioned allowances for applicable calendar years be deposited into a "Climate Change Transportation Energy Technology Fund" at the Department of the Treasury. Funds will be available for disbursal by the Climate Change Technology Board for early awards to vehicle manufacturers for establishing or expanding advanced technology vehicles or technology. Funds are available to the Board without further appropriation or fiscal year limitation.

Subtitle C−Cellulosic Biofuels: Establishes that a certain percentage of allowances available in applicable years through 2030 be allocated to producers of cellulosic biofuels.

Subtitle D−Low-Carbon Fuel Standard: Establishes a low carbon fuel standard (LCFS) that requires future transportation fuels to achieve on average progressively lower lifecycle GHG emissions per unit of fuel.

Title XII – "Federal Program to Protect Natural Resources"

Establishes that auction proceeds from a certain percentage of auctioned allowances for applicable calendar years be deposited into several funds, including the "Bureau of Land Management Fund," "Forest Service Emergency Firefighting Fund," and "National Wildlife Adaptation Fund," for specified natural resource funding.

Title XIII – "International Partnerships to Reduce Emissions and Adapt to Climate Change"

Subtitle A−Promoting Fairness to American Workers While Reducing Emissions: Directs the President to enter into international negotiations to ensure all major emitters of greenhouse gases enter into agreements mandating binding emissions reductions. Requires importers to submit allowances for foreign goods imported from countries without emissions limits comparable to those established in the legislation.

Subtitle B−International Partnerships to Reduce Deforestation and Forest Degradation: Creates offset credits for reductions in international deforestation. Establishes that one percent of allowances available through 2050 be available for disbursal to individuals and entities, including foreign governments, for carrying out land and forest carbon sequestration.

Subtitle C−International Partnerships to Deploy Clean Technology: Establishes that auction proceeds from a certain percentage of auctioned allowances for applicable calendar years be deposited into a "Clean Energy Deployment Fund." Funds are to be used for international technology transfer and technical assistance consistent with Section 114 of the substitute. Funds are to be made available without further appropriation or fiscal year limitation.

Subtitle D−International Partnerships to Adapt to Climate Change and Protect National Security: Establishes that auction proceeds from a certain percentage of auctioned allowances through 2050 be deposited into an "International Climate Change Adaptation and National Security Fund." Funds are to be used for international programs that minimize the impact of "potentially destabilizing global climate change impact." Funds are to be made available without further appropriation or fiscal year limitation.

Title XIV – "Deficit Neutrality"

Establishes that auction proceeds from a certain percentage of auctioned allowances for applicable calendar years be deposited into the "Deficit Reduction Fund" at the Department of the Treasury. Disbursement from the Deficit Reduction Fund may not be made except pursuant to an appropriation act.

Title XV – "Capping Hydrofluorocarbon Emissions"

The bill directs EPA to set up a separate cap and trade program for hydrofluorocarbons.

Title XVI – "Periodic Reviews and Recommendations"

Requires regular reviews of the legislation by the National Academy of Sciences and by EPA after enactment. Directs the President to deliver legislation in response to the EPA and NAS reports by 2020.

Title XVII – "Miscellaneous"

Subtitle A−Climate Security Act Administrative Fund: Establishes that auction proceeds from a certain percentage of auctioned allowances for applicable calendar years be deposited into the "Climate Security Act Administrative Fund" at the Department of the Treasury. Disbursements are to be used to fund agency activities required to carry out this Act. Disbursements from the Deficit Reduction Fund may not be made except pursuant to an appropriation act.

Subtitle B−Paramount Interest Waiver: Allows the President to make an emergency declaration modifying any provision of the legislation, in the event of a national security, energy security, or economic security emergency. The declaration is subject to congressional rescission or modification.

Subtitle C−Administrative Procedure and Judicial Review: Provides for rulemaking and judicial review procedures.

Subtitle D−Retention of State Authority: Allows states to take measures to combat global warming, provided that those limits are not less stringent than this bill.

Subtitle E−Tribal Authority: Allows the EPA to treat any federally-recognized Indian tribe as a state.

Subtitle F−Retail Carbon Offsets: Directs EPA to develop requirements for carbon credits or carbon offsets for consumers or retail use through the Energy Star program. These informal offsets cannot be used in satisfaction of any mandatory compliance obligation under a regulatory system for reducing greenhouse gas emissions.

Subtitle G−Clean Air Act: Directs the President to submit a study to Congress concerning the best way to ensure efficiency and certainty in the federal government's regulation of carbon dioxide emissions.

Subtitle H−Study on State−Federal Interaction: Creates a National Academy of Sciences study to examine the benefits and costs of state cap and trade programs, state programs to reduce emissions other than cap and trade, and their interaction with the federal program.

Administration Position

The Statement of Administration (SAP) for S. 3036 indicates the President would veto the bill. Citing concerns over the economic cost that will result, the SAP also asserts that S. 3036 fails address current impediments to large-scale nuclear power generation, assumes the use of undeveloped technologies, and fails to prevent the "misapplication of a patchwork of 30-year-old laws that were not designed to regulate greenhouse gas emissions."[5]

Cost

Substitute

CBO estimates that the substitute would increase revenues by about $902 billion over the 2009-2018 period. Direct spending would total about $836 billion for the same period, yielding $66 billion available for decreasing deficits or increasing surpluses. CBO notes that it did not have sufficient time to estimate discretionary spending or the anticipated receipts from the international reserve allowance requirement for certain imported goods.

For the 2018-2050 period, CBO estimates that net revenues attributable to the legislation would exceed annual direct spending. Private sector mandates contained in the bill exceed the threshold established in the Unfunded Mandates Reform Act (UMRA). CBO estimates that the cost of complying with the mandates would be "tens of billions of dollars annually." The thresholds established for intergovernmental mandate costs would not be exceeded.

S. 3036

For S. 3036, CBO estimates that revenues would total $1.21 trillion over the 2009-2018 period. Direct spending would increase by about $1.13 trillion, yielding $78 billion available for decreasing deficits or increasing surpluses. Discretionary spending under S. 3036 would increase by $84 billion over the 2009-2018 period. CBO considered both auction proceeds and allowances distributed at no charge in the bill as revenues and outlays.

In both scores, CBO treated the distribution of allowances as revenues and outlays because the federal government is responsible for both the existence of the allowances and for their liquidity in the market through rules permitting trading and through enforcement of the annual caps. CBO therefore views the distribution of allowances as "functionally equivalent to distributing cash."

Because allowance receipts would be a business charge, and therefore would decrease federal tax revenue, CBO decreased net receipts from allowances auctions and distributions accordingly.

[5] http://www.whitehouse.gov/omb/legislative/sap/110-2/saps3036-s.pdf

Possible Amendments

Amendments addressing a variety of issues are anticipated. They include:

- Clean energy technology;
- Economic costs, including the costs of energy inputs;
- Emissions caps and related cost containment;
- Auction revenues;
- Jobs; and
- International provisions.